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# The Deal is in the Details: Interim Results on MAI-CoC's Integration and Co-Location of Care University of Maryland

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Professor

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# OVERVIEW

- **STIRR-IT**
  - What does STIRR-IT mean?
  - Why Baltimore?
  - Implementation Strategy
  - Outcomes to date
- **QUESTIONS**



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# STIRR-IT



<http://www.insidethehuddle.tv/articles/traveler-baltimore-md-home-ravens>



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# STIRR-IT




Baltimore City

<http://www.insidethehuddle.tv/articles/traveler-baltimore-md-home-ravens>

# WHAT DOES STIRR-IT MEAN?

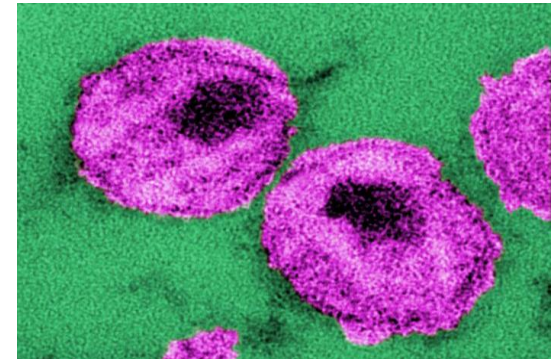
Screening &  
Testing for HIV/HCV,  
Immunization for Hepatitis A & B,  
Risk Reduction Counseling linked to  
Integrated HIV  
Treatment

A cluster of red dice with white letters spelling out 'AIDS'. The dice are arranged in a 3D pattern, with the letters 'A', 'I', 'D', and 'S' visible on the top faces of the dice. The dice are red with white text, and the background is white.



# WHAT IS STIRR?

- Evidence based practice





## NIH Public Access

### Author Manuscript

*Psychiatr. Serv.* Author manuscript; available in PMC 2013 April 22.

Published in final edited form as:

*Psychiatr. Serv.* 2010 September; 61(9): 885–891. doi:10.1176/appips.61.9.885.

## Assessing the STIRR Model of Best Practices for Blood-Borne Infections in Clients with Severe Mental Illness

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### Abstract

**Objectives**—People dually diagnosed with severe mental illness and substance use disorders are at markedly elevated risk for HIV, hepatitis B and hepatitis C, but generally do not receive basic recommended services. Several barriers impede receipt of services, including lack of programs offered by mental health providers, and client refusal of available services. Clients from ethnic minority groups are even less likely to accept recommended services. The intervention tested was designed to facilitate integrated infectious disease programming in mental health settings, and to increase acceptance of such services among clients.

**Methods**—A randomized clinical trial (n=236) compared enhanced treatment as usual (Control) to a brief intervention to deliver best practice services for blood-borne diseases in an urban, largely minority sample of dually diagnosed clients. This intervention included *Screening, Testing* for HIV and hepatitis, *Immunization* for hepatitis A and B, *Risk reduction* counseling and medical treatment *Referral* and support (STIRR) at the site of mental health care.

**Results**—Clients randomized to STIRR had high levels (over 80%) of participation and acceptance of core services. They were more likely to be tested for HBV and HCV; immunized for hepatitis A and B; increase their hepatitis knowledge and to reduce their substance abuse. However, they showed no reduction in risk behavior, were no more likely to be referred to care (81 vs. 79%) and showed no increase in HIV knowledge. Intervention costs were \$541 per client.

**Conclusions**—STIRR appears to be efficacious in providing a basic, best-practice package of interventions for dually diagnosed clients.



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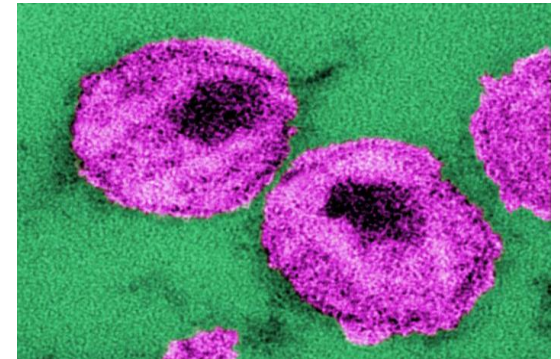
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# WHAT IS STIRR?

- Evidence based practice
- Provides HIV & HCV Screening and Testing, Immunization and Risk Reduction Counseling





# CDC RECOMMENDATIONS

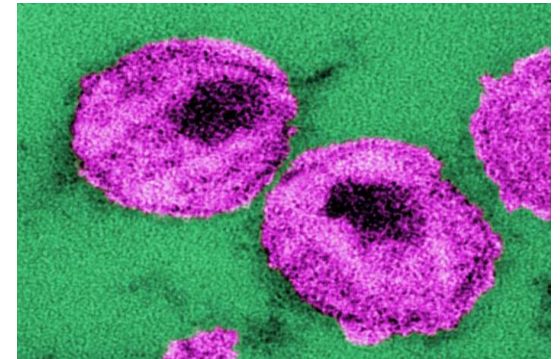
- HIV screening for all persons aged 13-64 in all health care settings in the United States
- HCV testing for all people in 1945-1965 age group and/or engage in IDU
- Vaccination with HBV and HAV for those who engage in unsafe sex or risky drug use





# WHAT IS STIRR?

- Evidence based practice
- Provides Screening, Immunization and Risk Reduction Counseling
- Targets people with Serious Mental Illness (SMI)





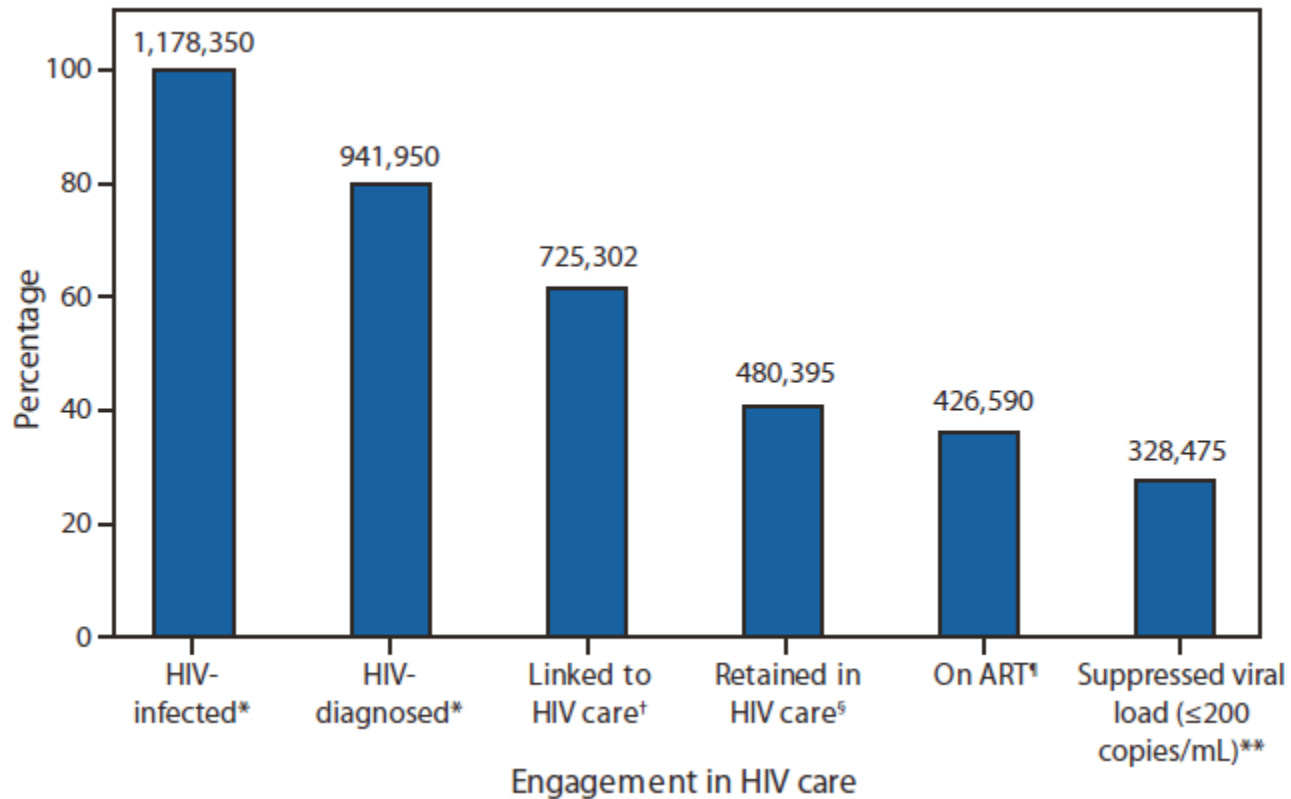
# WHY THOSE WITH SMI?

- They may be at Higher Risk:

CONDITION	PREVALENCE AMONG THOSE WITH SMI	PREVALENCE IN THE GENERAL POPULATION
HIV	1-23%	0.03%
HCV	8.5-30%	1.8%



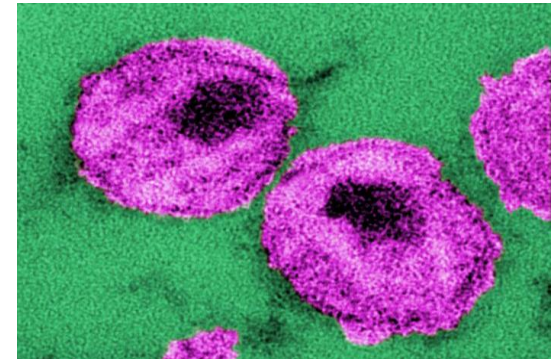
# THIS IS CRITICAL...





# WHAT IS STIRR?

- Evidence based practice
- Provides Screening, Immunization and Risk Reduction Counseling
- Targets people with Serious Mental Illness (SMI)
- Occurs in Behavior Health Centers





# WHY BEHAVIORAL HEALTH CENTERS?

- Less than ½ people at risk for HIV and HCV with SMI receive testing
- Reliance on mental health system to provide medical care
- Maximize efficiency to ensure people get into early treatment
- Allow for co-location of treatment



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# WHY BALTIMORE?

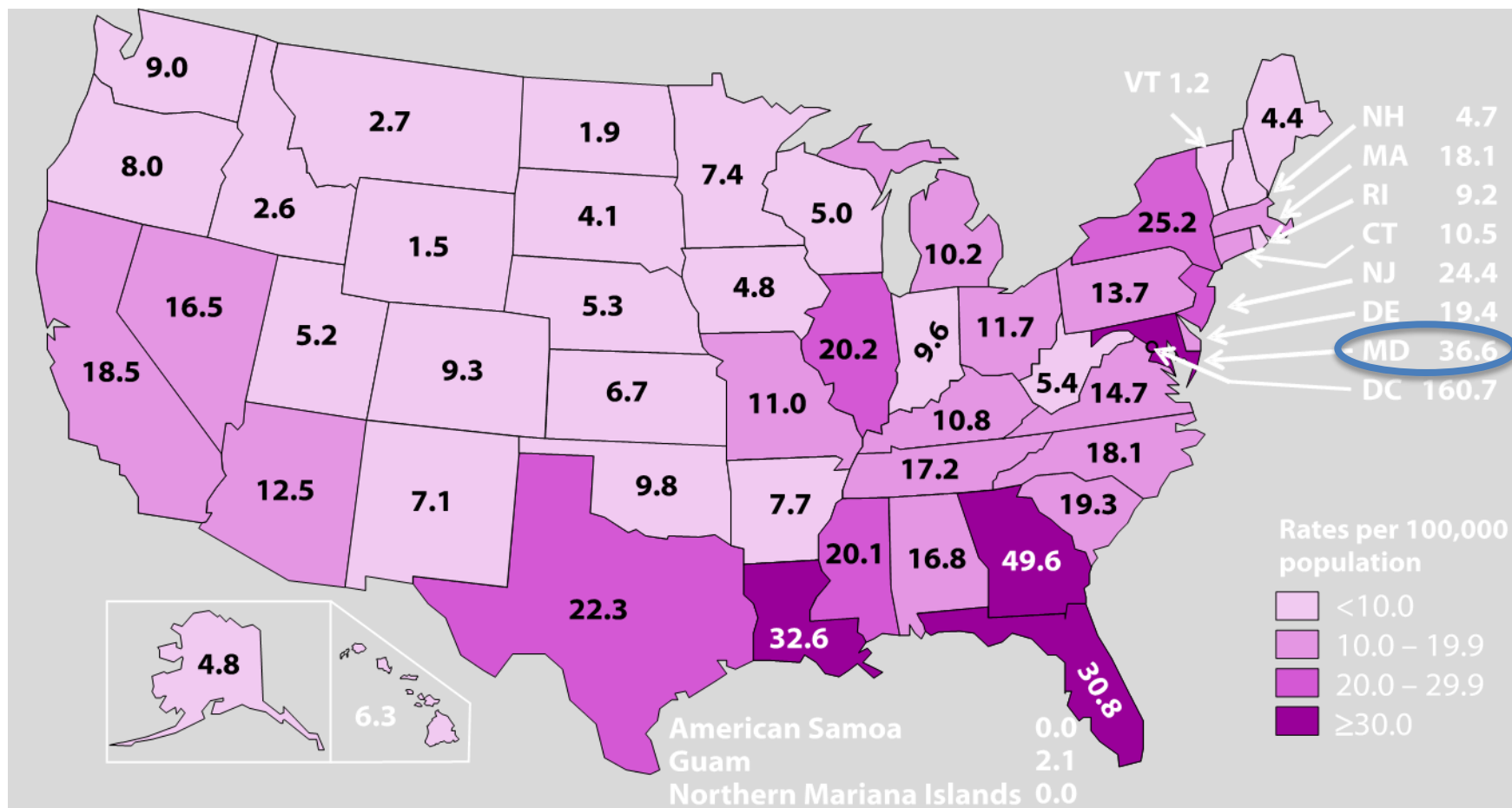


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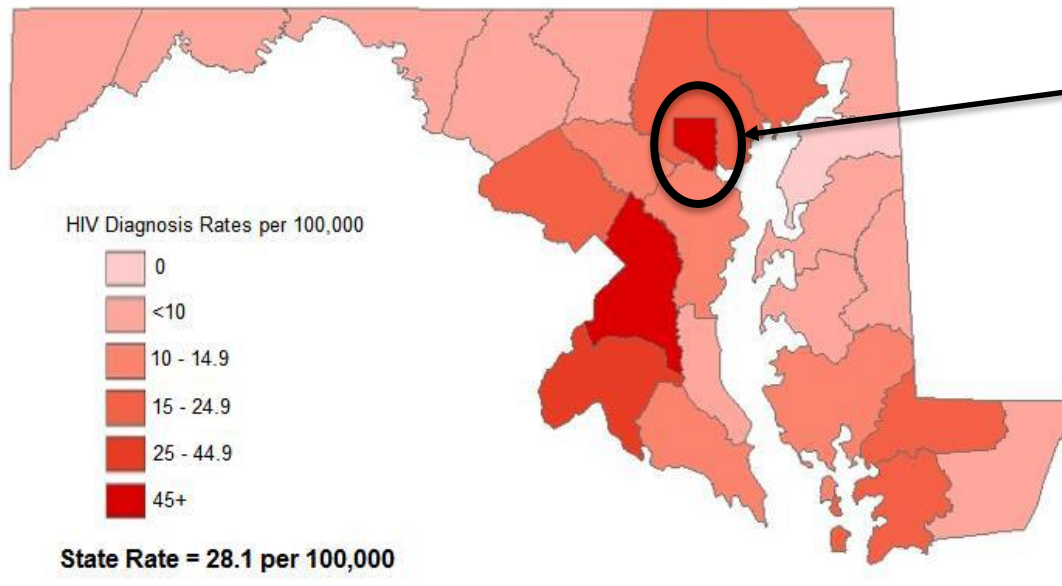
# UNITED STATES





# MARYLAND

**Maryland Adult/Adolescent HIV Diagnoses, Rates by Jurisdiction, 2013**



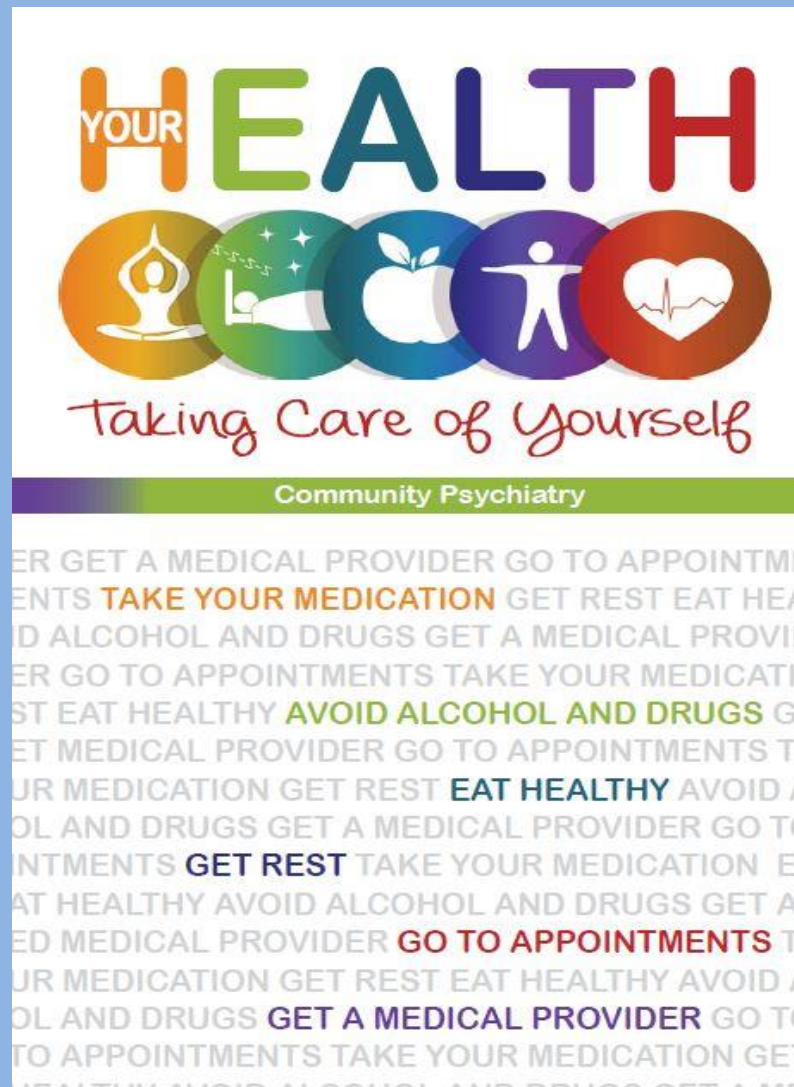
Baltimore



## RISK FOR HIV AND HCV

- Study of 153 people with SMI receiving mental health services in Baltimore, Maryland
- ~25% reported history of IDU
  - 92% reported sharing needles
- 83% reported history of unprotected sex
  - ~30 reported unprotected sex in last 6 months
- ~20% reported MSM history

# IMPLEMENTATION OF STIRR





# CLINIC DEMOGRAPHICS

- Over 80% self-identify as African-American.
- Average age is 53 years (range: 18-69 years)
- Half are women
- Over 70% diagnosed with SMI
- Vast majority with history of substance use



# STIRR IT-TEAM

- **NURSE and STIRR IT Educator**
  - Delivers STIRR-IT Intervention/Education
- **PEER NAVIGATOR**
  - Assists nurse and provides additional support
- **NURSE PRACTITIONER**
  - Provides on-site access for treatment and referral
- **CONSULTANTS**
  - ID, Psychiatry, Case Management and other clinical staff
- **CLINIC DIRECTOR**
  - Provides oversight of day to day clinic operations and MH issues



# STIRR-IT COMPONENTS

RFA Key Components	STIRR Intervention
HIV and HCV risk assessment	✓
HIV Testing	✓
HCV Testing	✓
Hepatitis A and B immunization	✓
Pre and Post Test Counseling	✓
Referral to On-Site Medical Care	✓



# STIRR-IT DELIVERY MODEL

- Integrated staff
- Accessible office near waiting room
- Blood drawing facilities on-site
- Vaccines stored and delivered on-site
- Connected to EMR
  - Accessible notes and results of testing





Screen, Test, Immunize, Reduce Risk and Refer into Integrated Treatment

- Education about Hepatitis and HIV
  - Testing for Hepatitis and HIV
  - Vaccination for Hepatitis A & B (Twinrix)
  - Discussing risk factors for getting Hepatitis and HIV
- Discussing ways to lower risk of contracting Hepatitis and HIV
- If positive, access to services needed
- Evaluation of the project (research interviews)

Visit Time Frame				
<i>Research Visit 1</i>	Intro Consent Baseline (\$25 Gift Card)	<i>Clinical Visit 1</i>	Overview of Project Education of HEP & HIV Blood draw	Today
		<i>Clinical Visit 2</i>	Blood Results Review of Risk Factors Twinrix #1 or HEP A #1	1 week later
		<i>Clinical Visit 3</i>	Review of Risk Factors Twinrix #2	1 month later
<i>Research Visit 2</i>	Re-Assessment (\$25 Gift Card)	<i>Clinical Visit 4</i>	Review of Risk Factors Twinrix #3 or HEP A #2	6 months later
<i>Research Visit 3</i>	Discharge (\$25 Gift Card)			1 year later

**SCHEDULE MAY CHANGE DUE TO MISSED APPOINTMENTS**

**Have questions or concerns?**

Please contact Rachel or Joseph at the STIRR IT clinic



Community Psychiatry

ER GET A MEDICAL PROVIDER GO TO APPOINTMENTS  
ENTs **TAKE YOUR MEDICATION** GET REST EAT HEALTHY  
ID ALCOHOL AND DRUGS GET A MEDICAL PROVIDER  
ER GO TO APPOINTMENTS TAKE YOUR MEDICATION  
ST EAT HEALTHY **AVOID ALCOHOL AND DRUGS** GET  
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this pamphlet

## EXPLAINS

- How these viruses infect people
- Whether a person should be tested for the diseases
- The treatment options for the diseases
- How to protect yourself from these viruses
- If someone has a disease, how to avoid spreading it to others

## What are INFECTIOUS Diseases?

Hepatitis B, Hepatitis C, and the Human Immunodeficiency (HIV) viruses are germs that cause illnesses and that can easily be spread from one person to another.

This pamphlet describes **3 infectious diseases** that are caused by viruses:

- 1 Hepatitis B Virus
- 2 Hepatitis C Virus
- 3 Human Immunodeficiency Virus (HIV)

These diseases are spread by contact with contaminated blood or other body fluids. Each of these diseases is serious, and can harm a person's health and well-being and result in life-threatening illness.



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**1 in 4 people with mental illness and substance abuse get infected with Hepatitis B virus, Hepatitis C virus, or HIV**

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## How COMMON are infected diseases?

Infectious diseases are more common in some places than others, and in some years compared to others. In the United States, about 1 person in 20 (5%) has Hepatitis B virus, and about 1 person in 100 (1%) has Hepatitis C virus. HIV is less common. Slightly more than 1 person in 300 (.4%) has HIV.

## Some people are more likely to get infectious diseases than others.

People who have a severe mental illness and any alcohol or drug problems are considerably more likely to have an infectious disease than people who do not have both disorders. Among people who have both problems, almost 1 in 4 (25%) has Hepatitis B virus, about 1 in 5 (20%) has Hepatitis C virus, and about 1 in 30 (3%) has HIV.

### HEPATITIS

What is Hepatitis? Hepatitis is a disease of the liver. The liver is a very important organ of the body. The liver is part of the digestive tract. It helps filter out toxic materials, builds proteins for the body, and stores vitamins, minerals, and carbohydrates. A person needs a functioning liver to stay alive.

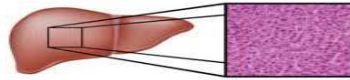






## How **SERIOUS** is Hepatitis?

When a person has Hepatitis their liver becomes sick or inflamed because it has been infected with a virus. Though it can take many years to happen, this sickness can cause more serious liver problems and death.



Healthy Liver



Cirrhosis of the Liver

### **P**ROBLEMS

can include:

- Cirrhosis - permanent scarring of the liver that reduces blood flow.
- Liver Failure - the liver is unable to function.
- Liver Cancer - cancer cells attack the liver.

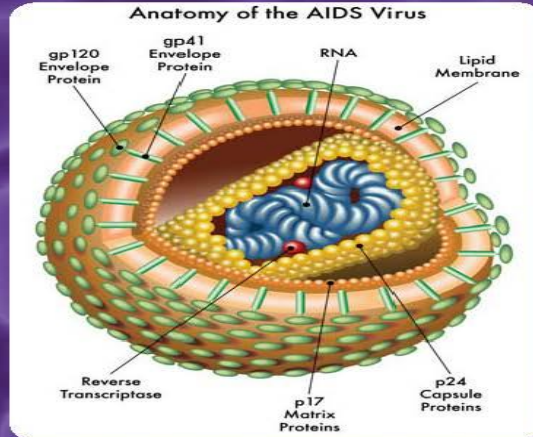
There are many kinds of Hepatitis viruses, but the most serious ones are Hepatitis B and Hepatitis C. Hepatitis A is another virus that affects the liver. If a person gets infected with Hepatitis A, their body can often fight it off so that it does not cause a life threatening, chronic illness the way that Hepatitis B and C do.

## **The liver is an important organ of the human body.**

This pamphlet will focus on Hepatitis B and C because of the serious illnesses they cause. Preventing infection with Hepatitis B and Hepatitis C, or taking care of oneself if one has the infection, is important to prevent damage to the liver.



## What are HIV and AIDS?



HIV is a virus that attacks and destroys special white blood cells in the body called T-helper cells or CD4 cells. These T-helper cells are a part of the immune system, which helps the body fight infection and stay healthy. When HIV destroys these cells, the immune system breaks down and is unable to fight infections. Infections that are normally mild can then grow to be very serious, causing the person to get very sick and even to die.

**Acquired Immunodeficiency Syndrome (AIDS) is the disease someone gets after the HIV virus has destroyed the immune system and the body can not fight infections.**

## How do Hepatitis viruses and HIV spread?

These viruses pass from one person to another through exposure to infected blood and body fluids. A person gets Hepatitis B, Hepatitis C, or HIV when the blood of an infected person enters the blood stream of an uninfected person. The HIV and Hepatitis B viruses can also be passed by the sex fluids (such as semen or vaginal secretions) of an infected person to an uninfected person when they have unprotected sex. Hepatitis C is much less likely to be passed to another person by sex fluids, but it can happen in some cases. Hepatitis A, the less serious virus, can be spread through kissing and oral sex.



## How do you KNOW if you could have gotten Hepatitis or HIV?

Some of the ways people get exposed to the contaminated blood of other people and get infectious diseases are listed below.

### CHECK

off the ones that apply to you.

- ☐ Sharing injection needles with other people
- ☐ Sharing a straw for snorting cocaine, amphetamine, or heroin with others
- ☐ Having unprotected sex (without a condom) with more than 2 partners over your life or with people you do not know well
- ☐ Having a blood transfusion, hemodialysis, or organ transplant from an infected source before 1992 (for Hepatitis B virus or Hepatitis C virus) or before 1985 (for HIV)
- ☐ Having a body piercing or tattoo from improperly sterilized needles
- ☐ Using personal articles such as a razor, tooth brush, nail file, or nail clippers from someone else with the infection
- ☐ Being born to a mother with the infection

If you checked off any of these items, talk with your case manager, nurse, or doctor about getting a test to see if you have been infected.



**Hepatitis B, Hepatitis C, and HIV can not be spread by using public toilet seats, unless there is direct contact with blood.**



## TESTS for Hepatitis B, Hepatitis C and HIV

Most people who have these viruses do not have symptoms until a long time after they get the virus, and they might not have any symptoms at all. People who have chronic Hepatitis B virus and Hepatitis C virus infection may experience tiredness (fatigue), loss of appetite, abdominal pain, nausea or vomiting, dark urine, or jaundice (yellow skin). People who have early symptoms of AIDS may experience sores and difficulty fighting off infections, such as a cough that will not go away.

Blood tests can tell if a person has Hepatitis B, Hepatitis C, or HIV. Since most infected people have no symptoms, who should be tested for the viruses? A person should **GET TESTED** if he or she has had any of the risk factors listed in the previous section, such as sharing needles or having unprotected sex.



## Have you ever been tested for Hepatitis B, C, OR HIV?

If you were tested and the results were negative, but you have been doing the activities on the check list on the previous page, you need to be retested every six months. If you have not been tested and need a test, talk with your case manager, nurse or doctor.

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**spread through insect bites, kissing, hugging,  
direct contact with other people's body fluids.**

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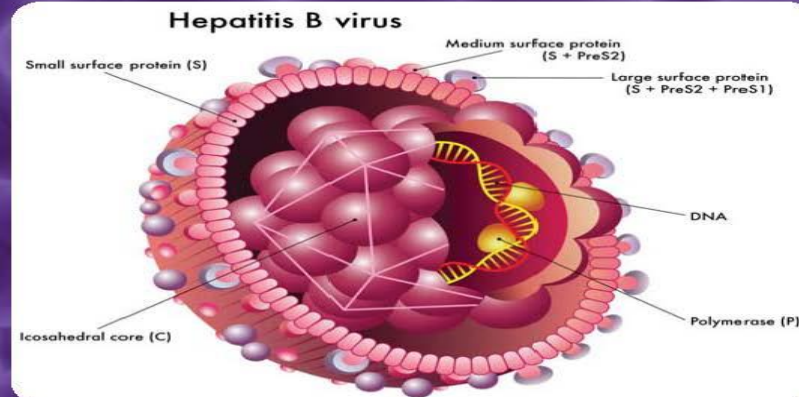
## TREATMENT for Hepatitis B

A vaccine can prevent Hepatitis B virus if the person gets the vaccine before he or she is exposed to the virus. This vaccine is free, safe and available. To get protection against Hepatitis B, a person needs 3 vaccine shots over a period of months.

Most people who get Hepatitis B virus recover on their own. However, about 1 in 10 people (10%) get a chronic illness after years of having the virus. Some people with chronic illness need to be treated. Your doctor can determine if you will benefit from treatment. Treatment is usually a pill given once a day for many years.

## Treatment will cure Hepatitis B.

People who have chronic Hepatitis B illness who get infected with a different virus, Hepatitis A, can then get sick with fulminant Hepatitis. Fulminant Hepatitis is a very serious disease that can cause death. To prevent this, people with Hepatitis B virus need to get Hepatitis A vaccine shots. All children are currently vaccinated against Hepatitis A and B.





## TREATMENT for Hepatitis C

**Unlike Hepatitis B, there is no vaccine that protects a person from getting Hepatitis C virus.**

No vaccine exists to prevent Hepatitis C. However, Hepatitis C can be treated and cured. The medications currently available to treat Hepatitis C are almost 100% successful and have very few side effects. .

### Hepatitis C



**People who have chronic Hepatitis C should get the Hepatitis A vaccine.**

## TREATMENT for HIV and AIDS

No vaccine or cure exists for HIV or AIDS. However, medications can make it so HIV is controlled like diabetes or high blood pressure. Medications to fight HIV are usually given once a day and have very few side effects. With treatment, persons with HIV can live into their 70s and 80s.

## Taking CARE of Oneself

When someone has one of these viruses, taking care of oneself can help the person stay well. Alcohol is toxic, or poisonous to the liver. Since Hepatitis also harms the liver, people infected with Hepatitis B virus and Hepatitis C virus need to avoid drinking alcohol, or drink as little as possible.

There are other things people with Hepatitis B, Hepatitis C, and HIV can do to help themselves, including:

- Getting a medical provider (such as a nurse or doctor) who can monitor health and discuss treatment options
- Going to appointments
- Taking medication as prescribed
- Getting enough rest
- Eating healthy foods
- Avoiding using alcohol and street drugs



Taking care of oneself can lessen the effects of these viruses. Make a list of what you want to do to take care of yourself.

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_



## How to AVOID getting or spreading Hepatitis and HIV



### AVOID

getting or spreading these infectious diseases by:

- Don't use intravenous drugs
- If a person can't stop using drugs, don't share needles with other people
- If a person feels that they have to share needles with other people, sterilize the works by immersing it in bleach for 30 seconds at least 3 times
- Don't have sex unless you are sure your partner has been tested and doesn't have any infectious diseases
- Always use a latex condom when having sexual relations
- Don't share personal items such as a razor, tooth brush, nail file, or nail clippers with others

Make a list of what you want to do to avoid getting or spreading these viruses.

- 1
- 2
- 3
- 4
- 5





## Important Information and Notes

### Important People

Medical Doctor's Name	Number
Case Manager's Name	Number
Support Person's Name	Number

### Appointments

Blood Test Appointment	Date	Time	Place
Immunization	Date	Time	Place
First Appointment	Date	Time	Place
Second Appointment	Date	Time	Place
Third Appointment	Date	Time	Place
Other Appointments	Date	Time	Place

### Questions To Ask

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### Things To Do

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# STIRR-IT—RESULTS TO DATE



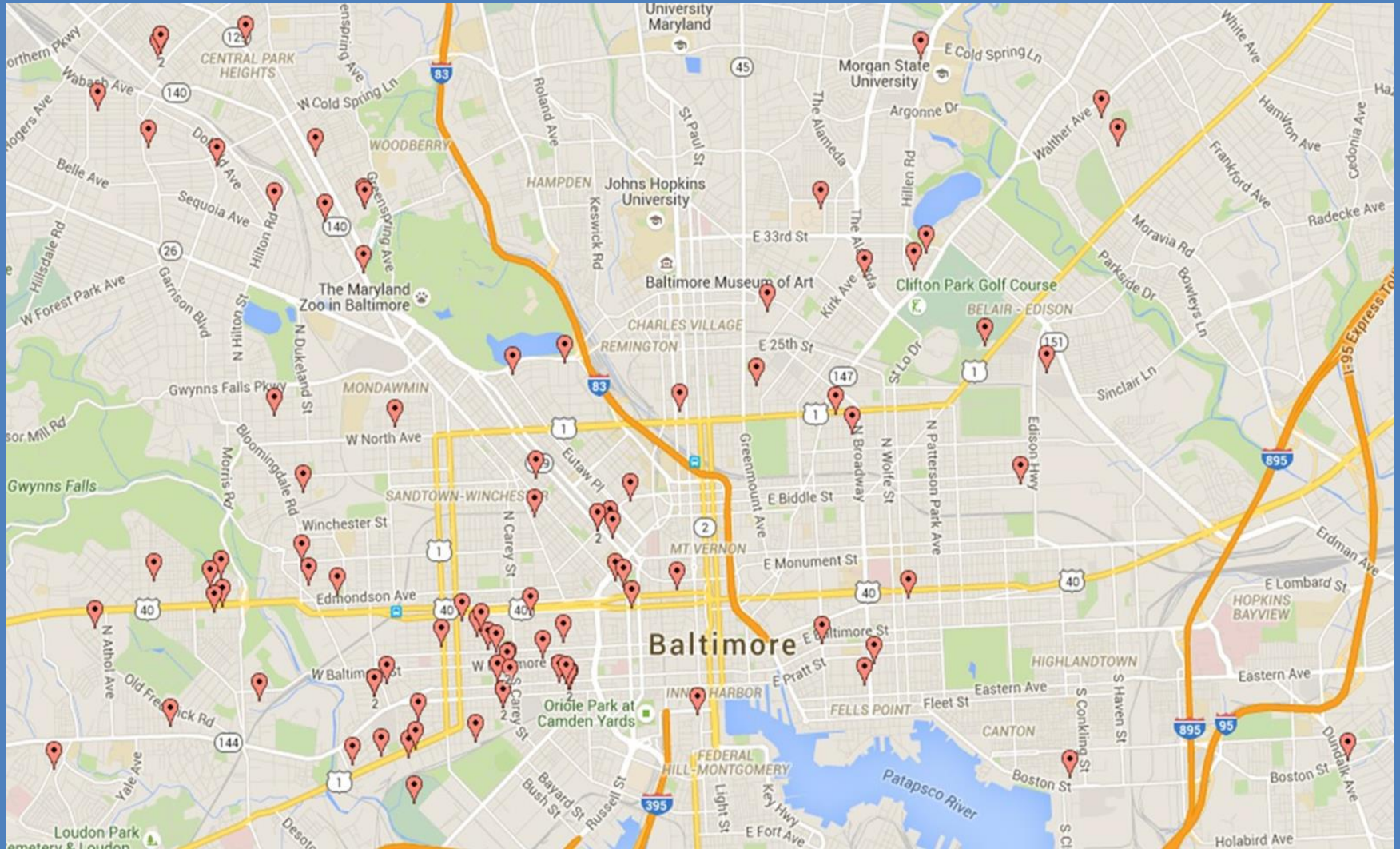
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# DEMOGRAPHICS

CHARACTERISTICS	PARTICIPANTS (N=121)	OVERALL CLINIC
AGE	50 YEARS	53 YEARS
AFRICAN-AMERICAN	96%	80%
FEMALE	39%	50%
HIGH SCHOOL	55%	50%
SMI DIAGNOSIS	100%	70%

# Where our Clients Live







# OUTCOMES

- **Successfully implemented model**
- **Process Measures:**
  - 121 began receipt of STIRR services
  - 84 completed STIRR services to date
  - 54/110 (50%) received immunization
    - (21= already had immunity)
- **Outcome Measures:**
  - 30 HCV positive (25%)
  - 7 HIV positive (6%)
  - 100% referred to care





# Client Level Data

- Baseline 121 completed
- 6 Month Follow Up 92 completed
- 12 Month Follow Up 50 completed





# CHALLENGES

- Staff Turn-over
- Acceptance of Vaccination





# QUESTIONS?

